UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 4
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October 13, 2015

Mr. Scott McLendon
Chief, Wilmington Regulatory Division
Department of the Army
Wilmington District, US Army Corps of Engineers
69 Darlington Avenue
Wilmington, NC 28403

Subject: **Draft Environmental Impact Statement (DEIS) for Holden Beach East End Shore Protection Project, Holden Beach, NC; CEQ Number: 20150243; ERP Number: COE-E30047-NC; CEQ Federal Register Date: 08/28/2015**

Dear Mr. McLendon:

Pursuant to Section 309 of the Clean Air Act and Section 102(2)(C) of the National Environmental Policy Act (NEPA), the EPA Region 4 Office has reviewed the Draft Environmental Impact Statement (DEIS) for the Holden Beach Shoreline Protection Project. This DEIS features an evaluation of the environmental consequences of a proposed protection project of the barrier island of Holden Beach which is eight miles long. The EPA notes that Holden Beach Island is located west of the Cape Fear River and has an east-west orientation, facing Long Bay and the open Atlantic Ocean to the south, and separated from mainland Brunswick County to the north by tidal marshes and the Atlantic Intracoastal Waterway (AIWW). Holden Beach is located along the eastern portion of Brunswick County. The island was incorporated in 1969 and has a current year-round resident population of approximately 575, with a seasonal population of over 10,000. The Town of Holden Beach is seeking Federal and state permits to allow for the construction of a 30-year shoreline protection project that would serve to mitigate chronic erosion experienced along the eastern portion on the Town's oceanfront shoreline. The purpose of the project is to protect and secure public infrastructure, roads, homes, businesses, beaches, recreational assets, and its protective dunes.

Previously, a temporary terminal groin field was constructed in the 1970s along the East End of Holden Beach due to extreme erosion. Although the groin field was successful and economical, the temporary nature of the nylon material and the lack of ongoing sand nourishment activities limited its long-term effectiveness. According to the DEIS, the Town sponsored projects have collectively placed 825,900 cubic yards (cy) of beach compatible material on the oceanfront shoreline, primarily to the east of station 110+00. The Town has not implemented any beach fill projects on the East End but instead has relied on United States Army Corps of Engineers' (USACE) navigation maintenance dredging projects for East End sand placement.

The EPA notes that the DEIS appropriately includes a section on "purpose and need" for the Proposed Action and that is to establish a comprehensive shoreline protection program. Furthermore, the program is to be under the independent authority of the Town of Holden Beach which will restore and maintain the East End beach and provide for the short- and long-term protection of residential structures, Town infrastructure, and recreational assets. The Proposed Action is needed to mitigate ongoing and chronic East End shoreline erosion which is projected to continue for the foreseeable future and that it threatens residential structures, Town infrastructure, recreational assets, and natural resources. Based upon our review of the DEIS, we have provided detailed comments in an attachment to this letter (See Attachment A).

Based upon the EPA's review, a NEPA rating of EC- 2 has been assigned to this DEIS, meaning that we have environmental concerns and have requested that the FEIS include updated information (where available) on a number of environmental issues. The DEIS did not provide a full analysis of potential Greenhouse gas (GHG) emissions and climate change effects. The EPA also has environmental concerns for water quality impacts that may result from the proposed project. If you have any questions, please contact Mr. Larry Gissentanna of my staff at gissentanna.larry@epa.gov or (404) 562-8248.

Sincerely,

Christopher A. Militscher
Chief, NEPA Program Office
Resource Conservation and Restoration Division

Attachment: Detailed comments

Attachment A – Detailed Comments
Holden Beach East End Shore Protection Project, Holden Beach, NC
Draft Environmental Impact Statement
CEQ Number: 20150243

The EPA also notes that the DEIS appropriately considers detailed alternatives for responding to the on-going erosion along Holden's Beach East End shore. The DEIS includes detailed discussions of each alternative, how each was formulated, and the costs of implementation. An economic impact assessment on the existing island development and infrastructure is also included in the DEIS (Section 3). As requested by the EPA for similar coastal erosion projects studied by the COE, both "no action" and "abandon/retreat" were considered in the DEIS among the detailed alternatives:

- Alternative 1 - No Action
- Alternative 2 - Abandon/Retreat
- Alternative 3 - Beach Nourishment
- Alternative 4 - Inlet Management and Beach Nourishment
- Alternative 5 - Short Terminal Groin and Beach Nourishment
- Alternative 6 - Intermediate Terminal Groin and Beach Nourishment

The DEIS reports that development of the recommended channel modifications and inlet management plan for Rich Inlet involved a screening process utilizing "Delft3D" computer model simulations ("runs") in which various designs for Nixon Channel, Green Channel, and the main entrance channel were evaluated. The results of all screening runs are included in the DEIS (Appendix B), as well as the morphologic conditions/history of Rich Inlet developed by Dr. William Cleary of the University of North Carolina at Wilmington, which are included with the DEIS (Sub-Appendix A in Appendix B).

The Preferred Alternative 6 (Alternative 6 – Intermediate Terminal Groin with Beach Nourishment) has been identified in the DEIS as the "Applicant's Preferred Alternative," and this alternative features a "terminal groin" with beach fill (from other sources).

The terminal groin in 5B would have the same design as that described for Alternative 5A, as would the beach fill plan proposed along Nixon Channel. Analysis of the Delft3D model results for Alternative 5A indicated the initial beach fill was excessive, particularly along the segment of the beach south of station 80+00. The DEIS reports that beach fill design associated with Alternative 5A was based upon the "optimal utilization of the material removed to construct the new channel connector" from the inlet gorge into Nixon Channel, and not on the beach fill volume needed to offset shoreline erosion. Since Alternative 5B does not include the excavation of a new connector channel into Nixon Channel, the beach fill for 5B was designed to address only erosion protection needs.

In addition to appropriately including information on "purpose and need" and including a detailed alternatives analysis, the EPA also notes that the DEIS complies with NEPA by including a chapter on the "affected environment" and identifying existing resources which occur

in the project area. Further, the DEIS also includes a chapter on environmental consequences and evaluates the project alternatives and discusses the anticipated changes to the existing environment including "direct, indirect, and cumulative effects." Finally, the DEIS appropriately includes a chapter on avoidance and minimization, and describes several actions and measures incorporated to avoid or minimize adverse effects to resources. The EPA offers the following additional comments on the DEIS for your consideration:

The DEIS did not include any analysis or information pertaining to the Council on Environmental Quality's (CEQ's) final draft guidance on Greenhouse Gas (GHG) Emission sand Climate Change Impacts. (See: https://www.whitehouse.gov/administration/eop/ceq/initiatives/nepa/ghg-guidance).

The USACE did not provide a discussion as to why this guidance is not applicable to the proposed project. The FEIS should provide an assessment of potential GHG emissions and what contribution to climate change may be anticipated from the proposed project, as appropriate. Section 7 Reference within the DEIS should include reference to the Council on Environmental Quality (CEQ) December 2014 revised draft guidance on climate change and greenhouse gases. Because the NEPA process includes an assessment of potential water quality impacts pursuant to Section 401 of the Clean Water Act, the EPA recommends the USACE to continue to coordinate with the North Carolina Division of Water Resources (DWR) and seek a DWR Section 401 water quality certification. The EPA has environmental concerns for potential impacts to water quality during the project implementation. Further, the EPA recommends that the USACE also to continue to coordinate with the North Carolina Division of Coastal Management (DCM) to ensure the full compliance with all State Environmental Policy Act (SEPA) requirements and to determine consistency with the Coastal Zone Management Act (CZMA). The EPA recommends that the FEIS document all of these efforts at coordination and include in the appendices all relevant and required certifications. The FEIS should provide for final requirements for avoidance and minimization and include any environmental commitments being made by the project sponsor (i.e., The Town of Holden Beach).